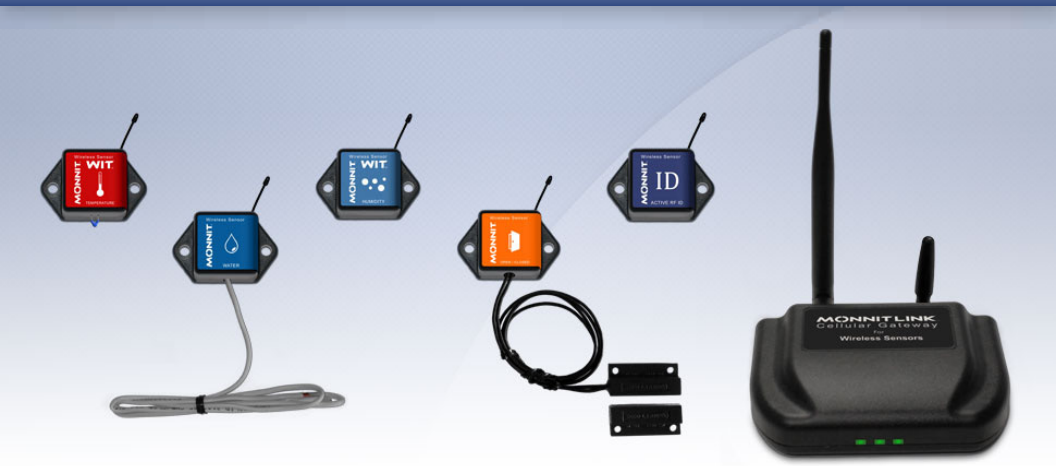


Monnit Wireless Sensors and Cellular Gateway Quick Start Guide

Inside the Box

You should find the following items in the box:

- Monnit™ Wireless Sensors
- MonnitLink™ Wireless Cellular Gateway
- Power Supply
- Antenna
- Mounting Hardware
- Quick Start Guide
- Batteries

MonnitLink™ Cellular Gateway Quick Start

- Create an iMonnit user account and assign wireless gateway and sensors.
- Plug the power supply into a power outlet then connect to the gateway.
- Once all three lights turn green, your network is ready to bring sensors online.

IMPORTANT!

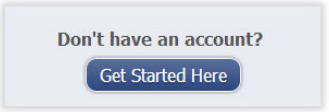
DO NOT plug your Cellular Gateway in until after you have created an account on iMonnit.com and added your cellular gateway and wireless sensors to the account.

1. Create a Monnit User Account and Setup Sensor Network

If this is your first time using the iMonnit online system site, you will need to create a new account. If you have already created an account you can skip to the "Logging into the Online System" section. The following instructions will guide you through the account creation process.

1. In a web browser, navigate to https://www.imonnit.com.

2. Click the "Get Started Here" button to create an account.



3. Follow the on-screen instructions to enter your account and contact information.

4. After entering your account and contact information, you will be prompted to create your first sensor network. Simply enter a name for this network.

5. Add the information from your MonnitLink™ gateway then click the "Assign Gateway" button.

6a. Add the information from your first Monnit wireless sensor then click the "Assign Sensor" button.

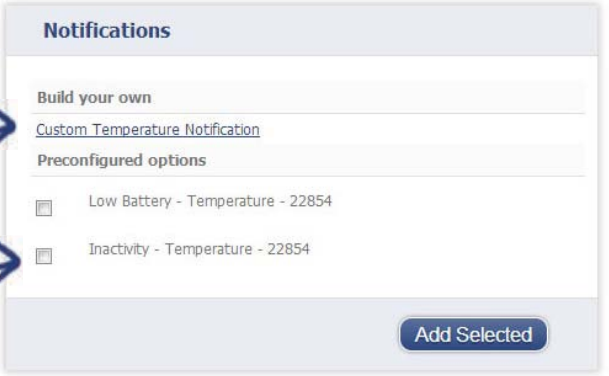
6b. On the next screen, enter a name for the wireless sensor and use the drop down to tell us how you are going to be using the wireless sensor. (This allows us to suggest settings for your sensor.) When finished, click the "Continue" button.

7. Setup sensor notification(s).

The next screen will allow you to setup notifications for the sensor that was just added to the network. You have the option of using pre-configured notifications based on suggestions from our system, or you can create your own custom notification. If you choose to create your own notification, it will be available for any similar sensors that are added to your account in the future.

Or, create your own custom notification here.

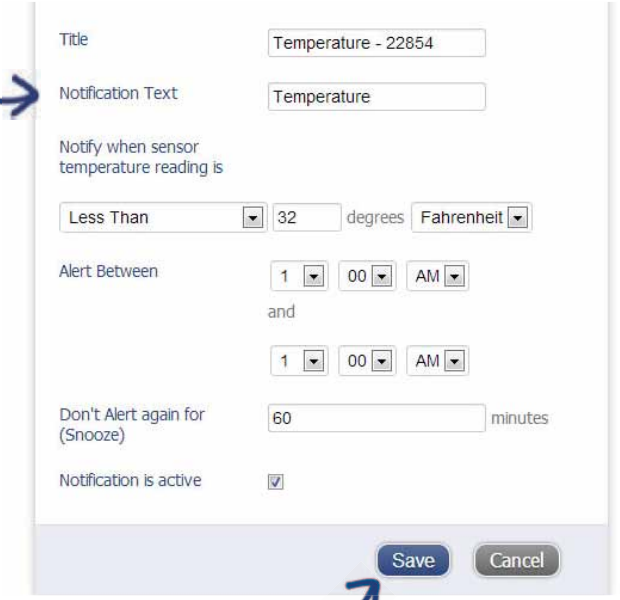
Select any pre-configured notifications you want to use with your sensor.



Custom notifications

To create a custom notification, click on the “Create your own” button. Set your custom notification settings and click “Save”.

Set notification settings.



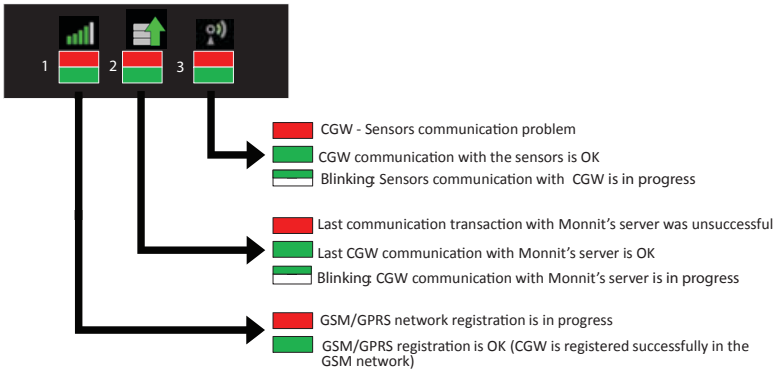
Then click “save”.

8. Assign any additional sensors.

When you have finished setting up the sensor, you will see a confirmation screen. At this point you can assign additional sensors to your network or begin using the system by clicking “Done”.

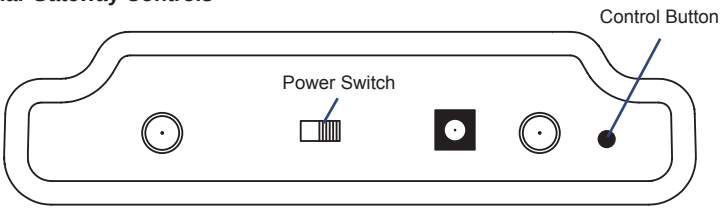
2. Using the MonnitLink CGW2 Cellular Gateway

1. Understanding the Ethernet Gateway Lights


1
2
3
CGW - Sensors communication problem
CGW communication with the sensors is OK
Blinking: Sensors communication with CGW is in progress
Last communication transaction with Monnit’s server was unsuccessful
Last CGW communication with Monnit’s server is OK
Blinking: CGW communication with Monnit’s server is in progress
GSM/GPRS network registration is in progress
GSM/GPRS registration is OK (CGW is registered successfully in the GSM network)

Note 1: The CGW resets itself after receiving new configuration from the server (ex. new HB), LED1 starts with RED and the reset cycle continues till all 3 LEDS are GREEN
Note 2: After successful SW upgrade , LED 2 and 3 flash RED then reset cycle starts.

2. Cellular Gateway Controls



Using the Control Button:

1) Pressing the power button will turn the device on or off. Powering on the device will trigger the gateway to immediately send all stored sensor messages to the online system and download any pending system messages to deliver to the sensors. (The default heartbeat for the cellular gateway is 5 minutes.)

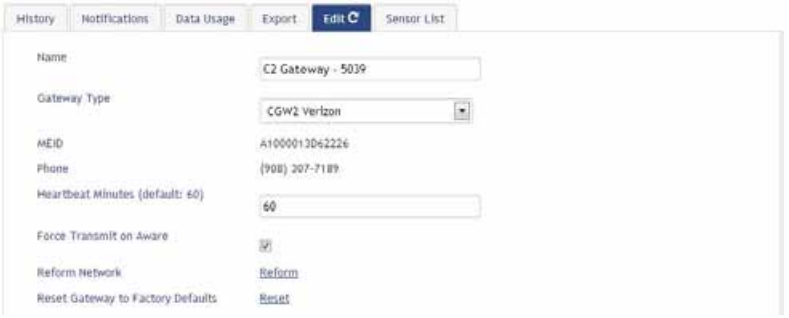
2) Press and hold to Factory Reset Button to reset the gateway to factory settings. This resets the gateway heartbeat to 5 minutes. You will need to login to the online system after resetting the gateway to reconfigure the gateway to your desired settings.

Note: If your gateway powers up and the lights do not turn green, you may have a connectivity issue. Wait a few minutes to see if the lights will turn green. If they do not, power off the device by pressing the power button, then turn the device back on. If it still does not connect, try resetting the device to the factory settings. If this still does not fix the issue, call Monit customer support.by disconnecting then reconnecting power. If it still does not connect, try resetting the device to the factory settings. If this still does not fix the issue, call Monit customer support.

3. Configuring The Cellular Gateway

The cellular gateway collects data from all sensors within range and is preconfigured to batch deliver the sensor messages to the online system at the specified heartbeat (every 5 minutes by default factory settings).

You can access gateway settings by clicking on “View Gateways” in the top bar of the “Overview” page. Clicking on a gateway in the list, opens the detail view. Click on the “Edit” tab to access the gateway’s settings.



3. Using Your Monnit Wireless Sensors

Insert Batteries Into Wireless Sensors

Important: *Make sure your sensors are at least 3ft. away from Ethernet Gateway.*

Peel back the black sticker cover of the battery slot and slide the coin cell battery into the sensor as shown in fig.1. It will power on within 10-20 seconds. Once online, your sensor is ready to be deployed. If you wish to change a sensor configuration, change the parameter in the software. The new parameters will be transmitted to the sensor on the next heartbeat. If you need a more immediate response from the sensor, power cycle the sensor by removing, then re-inserting the battery.

Notes:

- *If the sensor status indicator does not change, reset the sensor by removing the battery.*
- *Wait 60 seconds then re-insert the battery.*
- *When inserting the battery, make sure to push the battery all the way back using a paper clip.*
- *Note the proper orientation of battery in fig.1*

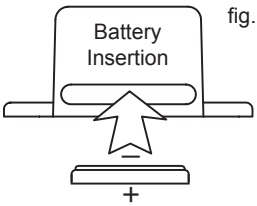


fig.1

Warning: *Your sensors ship with a 10 minute heartbeat. It is recommended that unless you are using the AA battery solution, you should set the heartbeat to no faster than one hour to preserve battery life. When changing a sensor’s heartbeat, the new configuration information will be sent to the sensor on it’s next heartbeat. If you want to update the sensors immediately you can reset them manually.*

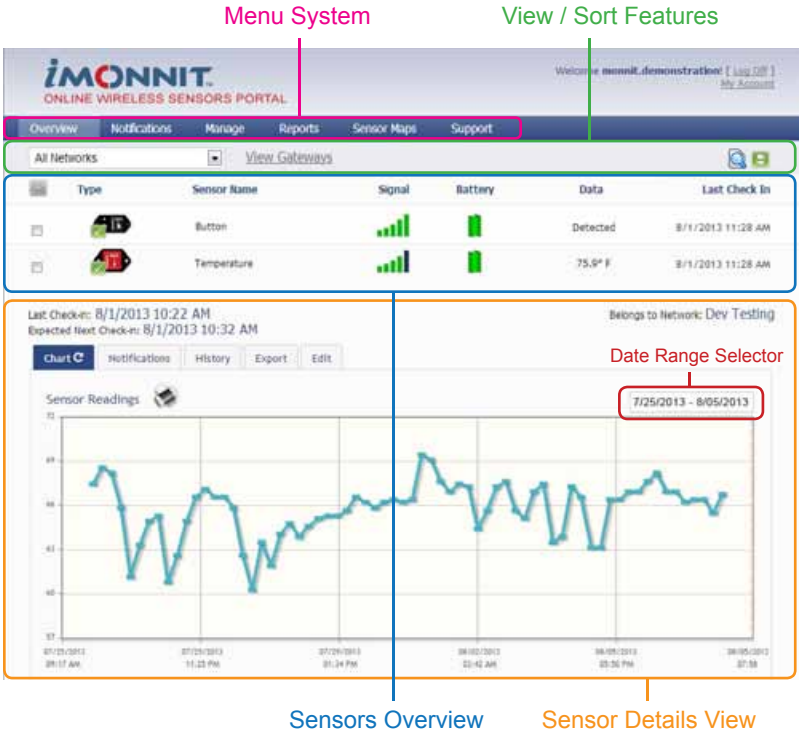
Manual Sensor Reset Process:

1 - Using the end of a paper clip, push the batteries out of the sensors through the small hole in the top of the sensor
2 - Change the sensor heartbeat through the online system
3 - Re-insert the batteries into the sensors

4. Using The iMonnit™ Online Wireless Sensor System

1. Understanding The Online Interface

When you log into the online system, the default view shows all of your sensors last recorded data.



Menu System

Overview	- Shows all sensors in the account and their last readings.
Notifications	- Manage sensor notifications and show all sent notifications.
Manage	- Manage networks, sensors and gateways.
Reports	- Printable account and sensor network reports.
Sensor Maps	- Visual maps to help you track sensor placement.
Support	- Support information for using sensors and software.

View / Sort Features

This section allows you to sort the sensors being viewed and search for sensors on your account.

Sensor Overview

Displays sensors on your account with their last reading and status information. Clicking on a sensor row expands the “Sensor Detail View” allowing you to view detailed information for the selected sensor.

To the left side of each sensor row is an indicator to help you understand the current status of the sensor.

- Sensor is checking in and within user defined safe parameters.
- Sensor has met or exceeded a user defined threshold or triggered event.
- Sensor has not checked in (inactivity alert sent).
- No sensor readings since shipping
- No sensor readings will be recorded (Inactive)
- Edit your sensor
- Edit your sensor, however some fields are unavailable until pending transactions have been downloaded to the sensor

Sensor Details View

Clicking on a sensor row on the "Overview" page expands the row to include a detailed sensor view for the selected sensor.

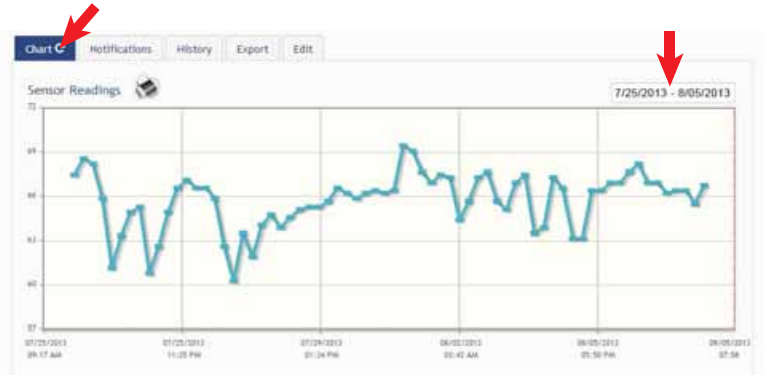
Select a tab to change between:

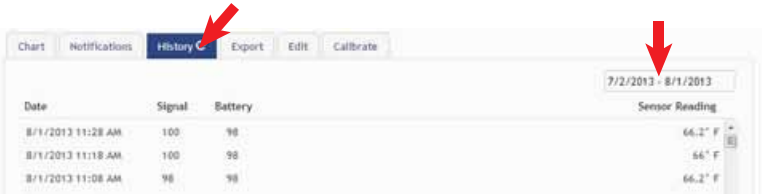
Chart	- Displays a graphical view of the selected sensor's data.
Notifications	- Allows you to manage notifications for the sensor.
History	- Displays a history of the selected sensor's data.
Export	- Allows you to archive data by exporting as a .csv file.
Edit	- Allows you to manage sensor settings.
Calibrate	- Available on certain sensor types to provide more accurate data.

Note: The data shown on the chart, notification, history and export tabs is based on the date range indicated on the upper right side of the sensor detail information. To change the date range, click inside the date box.

2. Chart and History Views.

Clicking on the "Chart" or "History" tabs within the sensor detail panel allows you to view the sensor's data history in a graphical chart format or as text.

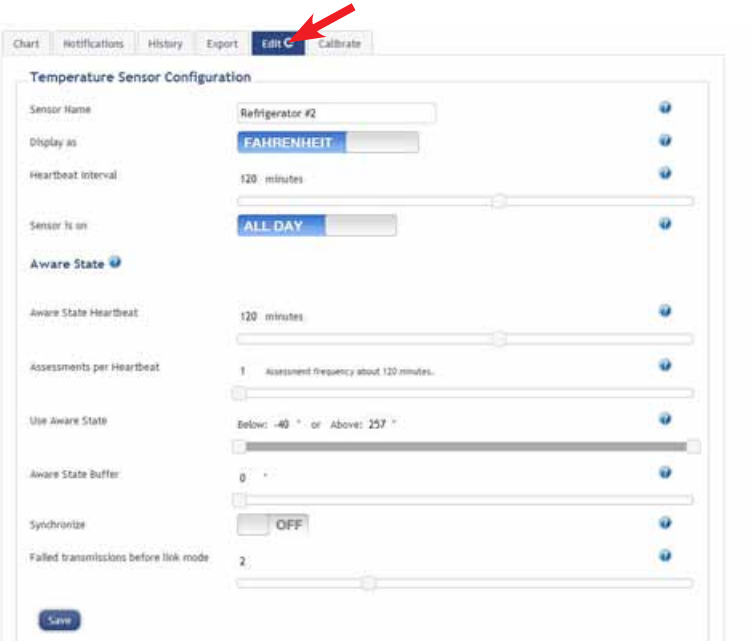




Note: To change the date range of the viewable information, click on the date range box at the top right of the sensor detail panel.

3. Configuring Sensor Settings

To edit a sensors operation settings, click on the sensor overview row to display the details view. Click on the "Edit" tab to access the sensor configuration panel.

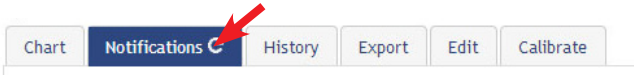


The sensor edit panel allows you to set the primary configurations for the sensor. Mousing over the question mark icon by each setting will provide an explanation of that setting. When you have finished making changes, press the "Save" button at the bottom of this section.

Note: Be sure to click the "Save" button anytime you make a change to any of the sensor parameters. *All changes made to the sensor settings will be downloaded to the sensor on the next sensor heartbeat (check-in). Once a change has been made and "Saved," you will not be able to edit that sensor's configurations again until the sensor has downloaded the new setting.*

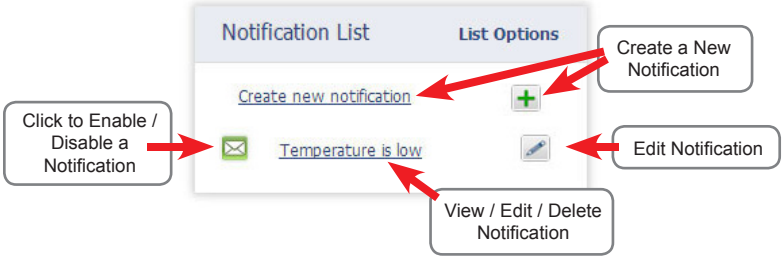
4. Editing and Adding Notifications

Notifications for a single sensor can be created, deleted or edited by clicking the "Notifications" tab in a sensor's detail view.



Notifications can be created, deleted or edited for any sensor or group of sensors by clicking on "Notifications" in the main menu.

The Notification List Window



To create a new notification, click on "Create new notification", then name the notification and select the type of notification you would like to create.

Class of Notification

There are four notification options available when creating a new notification.

- **Application** - Application notifications are sensor specific (i.e. water sensor = trigger alert when water present, temp sensor = trigger alert when temp is above 70F, etc.). If creating an application specific notification, you will need to choose what sensor type you are creating the alert for. The system will automatically populate a list of sensor types that are currently being used within the network. The notificatiion you create will be based on the selected sensor type.

- **Inactivity** - Set-up "Inactivity" notifications to alert you when your sensors have stopped communicating with the servers. Failure to set up an "Inactivity" notification will result in no email/SMS txt being sent should your sensors stop communicating with the servers.

- **Low battery** - Allows users to define a battery power percentage level that will trigger an alert from the system, warning them to replace batteries.

- **Advanced Notifications** - Allows the user to set notifications based on more advanced rules, such as comparing past data points with the current one to determine if the notification should be sent.

Setting and Editing Notification Settings

People to Notify
Start typing a name into the box and the system will automatically populate the name of a user within your sensor network. If there are already multiple users on the network, a drop down list of names will appear. Select the name of the user for the notification. If the person to be notified does not have an account on the network, you may quick add them by selecting the “Add Recipient” link and entering in their contact information.

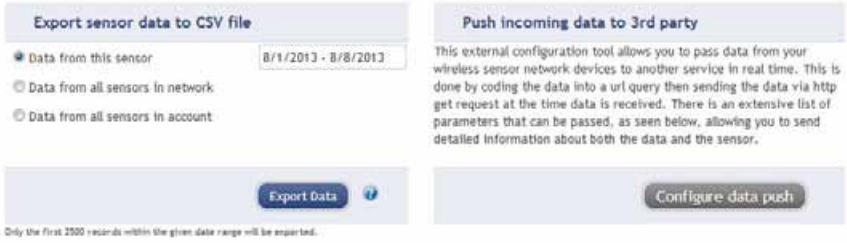
Notification Parameters
This area allows the user to set notification parameters such as naming the notification, customizing the notification message and setting sensor conditions that will trigger the notification.

Assigned Devices
Allows you to tell the system which sensor(s) will trigger the notification being created. When a notifications is sent from the system, it will automatically include the sensor name and data that caused the notification to be sent.

A notification can be assigned to multiple sensors. Application specific notifications (ex. Temperature) can only be assigned to sensors of that application type. General notifications such as “battery status”, can be assigned to any or all sensors.

5. Exporting Sensor Data

Clicking on the “Export” tab within the sensor data window allows you to export sensor data to a comma separated value (.csv) file or send the sensor data to an external web source.


Export sensor data to CSV file
Data from this sensor
8/1/2013 - 8/8/2013
Data from all sensors in network
Data from all sensors in account
Export Data
Push incoming data to 3rd party
This external configuration tool allows you to pass data from your wireless sensor network devices to another service in real time. This is done by coding the data into a url query then sending the data via http get request at the time data is received. There is an extensive list of parameters that can be passed, as seen below, allowing you to send detailed information about both the data and the sensor.
Configure data push

To export sensor data you must first select the date range for the data you want to export. Once the date range is selected, determine whether you want sensor data from the selected sensor only, from all sensors in the network or all sensors assigned to the account. When you are finished, click on “Export Data” at the bottom of this window. The data will be exported to a comma separated value (.csv) file format.

Note: Only the first 2,500 records within the selected date range will be exported.

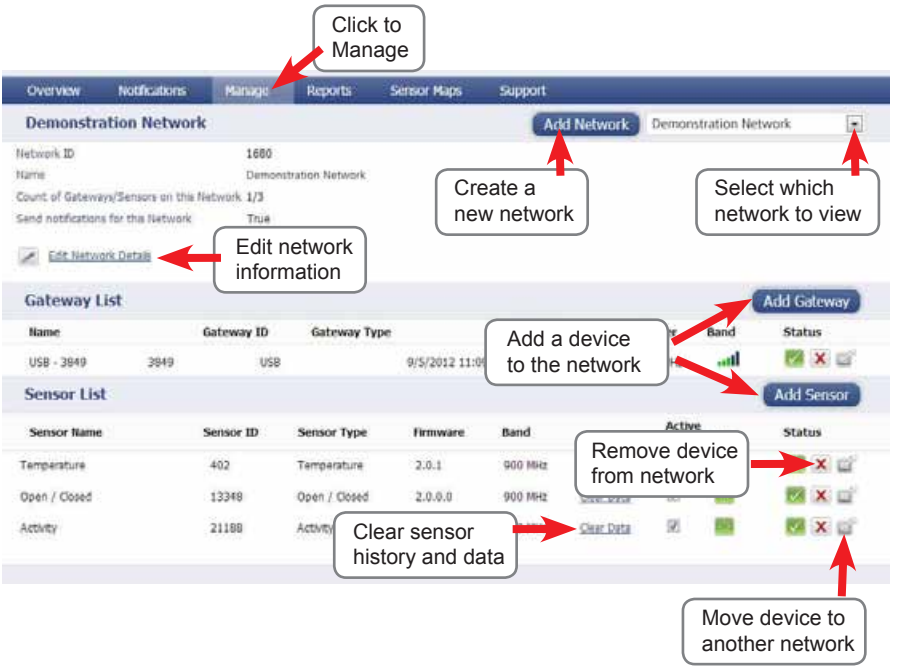
You can alternately send your sensors’ incoming data to a 3rd party by clicking on the “Configure data push” button at the bottom of the window. From this area you can pass data from your wireless sensor network devices to another service in real time. This is done by coding the data into a url query then sending the data via http get request at the time data is received. There is an extensive list of parameters that can be passed, as listed in the viewed window, that allow you to send detailed information about both the data and the sensor.

6. Calibrating Sensor Data

Certain wireless sensors can be calibrated for more accurate readings (ex. temperature sensors). If calibration is possible for a sensor, the “Calibrate” tab will be visible in the detail view. To calibrate a sensor, replace the last reading with the more accurate reading and click “Calibrate”. All future readings from the sensor will be based off the new calibration setting.

7. Manage Sensor Networks

To view or edit information about your wireless sensor network(s), click on “Manage” in the main navigation. This area allows you to edit network details, create new sensor networks, and manage wireless gateways and sensors for your network(s).



Note: Some buttons and features are only visible if there is more than one sensor network setup on the account, such as the network selection box in the upper right corner.

If more than one sensor network is setup on the account, you can easily move gateways and sensors from one network to another by clicking on the “Move Device” button at the far right of the device’s “Status” section.

If you clear a sensor’s data, the data history is deleted from the entire system and can not be recovered. We recommend exporting a sensor’s data history using the export function in the sensor details view (“Overview” page) before clearing the sensor’s data if you want to have a record of the data.

Additional Information and Support

You can find additional information on using Monnit Wireless Sensors, including product documentation and video tutorials on the Monnit website at http://www.monnit.com/support.

Information to Users

The Monnit wireless products referenced in this Quick Start Guide have been tested and found to comply with the standards for FCC, IC and CE certifications. For certification information on individual products please view product data sheets or product specifications on the Monnit website.

Industry Canada

WARNING: *Changes or modifications not expressly approved by Monnit could void the user's authority to operate the equipment.*

For additional information or more detailed instructions on how to use your Monnit Wireless Sensors or the iMonnit Online System, please visit us on the web at http://www.monnit.com/support/.

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